

IN THE CLAIMS

1. (Currently amended) A method for use by at least one entity in participating in a collaborative information exchange with at least one other entity, the method comprising the steps of:

obtaining annotation data, the annotation data comprising one or more links to information associated with the collaborative information exchange and further comprising metadata associated with at least one target document of the one or more links, wherein at least a portion of the annotation data is represented as at least one hierarchical representation ~~which is structure[[d]] so as to be~~ capable of defining one or more of: (i) an indication of organizational data entities; (ii) a specification of collaborating entities; (iii) a specification of content type pertinent to the collaborating entities; (iv) a specification of access control information; (v) a specification of dependency information for the organizational data entities; and (vi) a specification of a type of construct defining collaboration activity; and

transmitting at least a portion of the annotation data to the at least one other entity such that the at least one other entity accesses at least a portion of the information associated with the collaborative information exchange by selecting at least one of the one or more links and utilizes at least a portion of the annotation data defined in the at least one hierarchical representation;

wherein the at least one of the one or more links is selected based at least in part on the metadata associated with at least one target document of the at least one of the one or more links.

2. (Previously Presented) The method of claim 1, wherein selection of at least one of the one or more links permits the at least one other entity to access the information on a need basis.

3. (Previously Presented) The method of claim 1, wherein at least one of the one or more links may be selected by the at least one other entity at a time not contemporaneous with the time of receipt of the annotation data.

4. (Original) The method of claim 1, wherein the annotation data is schema-less.

5. (Original) The method of claim 1, further comprising the step of embedding information in a message transferred between the at least one entity and the at least one other entity.

6. (Original) The method of claim 5, wherein the embedded information enables a status tracking function.

7. (Original) The method of claim 6, wherein at least a portion of the embedded information is employed to cause notification of one or more entities about a status or an action.

8. (Original) The method of claim 7, wherein the notification is in the form of an alert type.

9. (Original) The method of claim 1, wherein messages exchanged between the at least one entity and the at least one other entity are governed by one or more message exchange patterns.

10. (Original) The method of claim 9, wherein the one or more message exchange patterns comprise at least one of a construct and a primitive.

11. (Original) The method of claim 9, wherein the one or more message exchange patterns control at least one of non-structural and non-deterministic information exchange flow.

12. (Original) The method of claim 1, wherein the obtaining step further comprises retrieving the annotation data from storage.

13. (Original) The method of claim 1, wherein the obtaining step further comprises generating the annotation data.

14. (Canceled).

15. (Previously Presented) The method of claim 1, wherein at least a portion of the annotation data and status information embedded in a received message are used to determine an individual or an authority to be notified.

16. (Original) The method of claim 1, wherein the collaborative information exchange is performed in accordance with a design collaboration application.

17. (Original) The method of claim 16, wherein at least one collaborating entity communicates with the design collaboration application.

18. (Original) The method of claim 1, modifying at least one of the annotation data and organizational data, based on changes in at least one of project, task and people assignments.

19. (Currently amended) Apparatus for use by at least one entity in participating in a collaborative information exchange with at least one other entity, the apparatus comprising:

a memory; and

at least one processor coupled to the memory and operative to: (i) obtain annotation data, the annotation data comprising one or more links to information associated with the collaborative information exchange and further comprising metadata associated with at least one target document of the one or more links, wherein at least a portion of the annotation data is represented as at least one hierarchical representation ~~which is structure[[d]] so as to be~~ capable of defining one or more of: (a) an indication of organizational data entities; (b) a specification of collaborating entities; (c) a specification of content type pertinent to the collaborating entities; (d) a specification of access control information; (e) a specification of dependency information for the organizational data entities; and (f) a specification of a type of construct defining collaboration activity; and (ii) transmit at least a portion of the annotation data to the at least one other entity such that the at least one other entity accesses at least a portion of the information associated with the collaborative information exchange by selecting at least one of the one or more links and utilizes at least a portion of the annotation data defined in the at least one hierarchical representation; wherein the at least one of the one or more

links is selected based at least in part on the metadata associated with at least one target document of the at least one of the one or more links.

20. (Previously Presented) The apparatus of claim 19, wherein selection of at least one of the one or more links permits the at least one other entity to access the information on a need basis.

21. (Previously Presented) The apparatus of claim 19, wherein at least one of the one or more links may be selected by the at least one other entity at a time not contemporaneous with the time of receipt of the annotation data.

22. (Original) The apparatus of claim 19, wherein the annotation data is schema-less.

23. (Original) The apparatus of claim 19, wherein the at least one processor is further operative to embed information in a message transferred between the at least one entity and the at least one other entity.

24. (Original) The apparatus of claim 19, wherein messages exchanged between the at least one entity and the at least one other entity are governed by one or more message exchange patterns.

25. (Original) The apparatus of claim 19, wherein the obtaining operation further comprises retrieving the annotation data from storage.

26. (Original) The apparatus of claim 19, wherein the obtaining operation further comprises generating the annotation data.

27. (Canceled).

28. (Original) The apparatus of claim 19, wherein the collaborative information exchange is performed in accordance with a design collaboration application.

29. (Currently amended) An article of manufacture for use by at least one entity in participating in a collaborative information exchange with at least one other entity, comprising a computer readable storage medium containing one or more programs which when executed implement the steps of:

obtaining annotation data, the annotation data comprising one or more links to information associated with the collaborative information exchange and further comprising metadata associated with at least one target document of the one or more links, wherein at least a portion of the annotation data is represented as at least one hierarchical representation ~~which is structure[[d]] so as to be capable of defining one or more of: (i) an indication of organizational data entities; (ii) a specification of collaborating entities; (iii) a specification of content type pertinent to the collaborating entities; (iv) a specification of access control information; (v) a specification of dependency information for the organizational data entities; and (vi) a specification of a type of construct defining collaboration activity; and~~

transmitting at least a portion of the annotation data to the at least one other entity such that the at least one other entity accesses at least a portion of the information associated with the collaborative information exchange by selecting at least one of the one or more links and utilizes at least a portion of the annotation data defined in the at least one hierarchical representation;

wherein the at least one of the one or more links is selected based at least in part on the metadata associated with at least one target document of the at least one of the one or more links.

30. (Currently amended) Apparatus for use in participating in a collaborative information exchange between one entity and at least one other entity, the apparatus comprising:

an annotation data generation tool for generating annotation data, the annotation data comprising one or more links to information associated with the collaborative information exchange and further comprising metadata associated with at least one target document of the one or more links, wherein at least a portion of the annotation data is represented as at least one hierarchical representation ~~which is structure[[d]] so as to be capable of defining one or more of: (i) an indication of organizational data entities; (ii) a specification of collaborating entities; (iii) a specification of content type pertinent to the collaborating entities; (iv) a specification of access control information; (v) a~~

specification of dependency information for the organizational data entities; and (vi) a specification of a type of construct defining collaboration activity;

a collaborative directory coupled to the annotation data generation tool for storing the generated annotation data; and

an annotation data manager coupled to the collaborative directory for managing the annotation data such that the at least one other entity, upon receiving at least a portion of the annotation data from the one entity, accesses at least a portion of the information associated with the collaborative information exchange by selecting at least one of the one or more links and utilizes at least a portion of the annotation data defined in the at least one hierarchical representation;

wherein the at least one of the one or more links is selected based at least in part on the metadata associated with at least one target document of the at least one of the one or more links.

31. (Original) The apparatus of claim 30, wherein the annotation data manager is responsive to a collaboration pattern, the collaboration pattern representing iterative actions that may occur between the one entity and the at least one other entity.

32. (Original) The apparatus of claim 30, wherein the annotation data comprises a schema-less annotation structure.

33. (Original) The apparatus of claim 30, further comprising a web-based interface for use in participating in the collaborative information exchange.

34. (Original) The apparatus of claim 30, wherein the collaborative directory serves as a hub for managing collaborative resources of multiple organizations that use the hub as a central place to perform business collaboration.

35. (Currently amended) A method of deploying a business collaboration system, the method comprising the steps of:

deploying at least one on-demand business collaboration hyperchain-based management apparatus operative to implement an on-demand information exchange model using a schema-less hierarchical annotation linkage for use in one or more of:

defining at least one business collaboration process template;

creating at least one set of data constructs;

selecting at least one other collaborating entity for information exchange capable of acting on at least one set of business constructs;

customizing a process template to support a selected set of business constructs; and

generating at least one set of activities in a business construct with initial collaborative data entities.

36. (Currently amended) A method for providing a service, in accordance with a service provider, to allow at least one entity to participate in a collaborative information exchange with at least one other entity, the method comprising the steps of:

deploying a collaborative information exchange system that allows the at least one entity to:

(i) obtain annotation data, the annotation data comprising one or more links to information associated with the collaborative information exchange and further comprising metadata associated with at least one target document of the one or more links, wherein at least a portion of the annotation data is represented as at least one hierarchical representation which is structure[[d]] ~~so as to be~~ capable of defining one or more of: (i) an indication of organizational data entities; (ii) a specification of collaborating entities; (iii) a specification of content type pertinent to the collaborating entities; (iv) a specification of access control information; (v) a specification of dependency information for the organizational data entities; and (vi) a specification of a type of construct defining collaboration activity; and (ii) transmit at least a portion of the annotation data to the at least one other entity such that the at least one other entity accesses at least a portion of the information associated with the collaborative information exchange by selecting at least one of the one or more links and utilizes at least a portion of the annotation data defined in the at least one hierarchical representation; wherein the at least one of the one or more links is selected based at least in part on the metadata associated with at least one target document of the at least one of the one or more links.